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SOVIET MODEL RII-24 UNIVERSAL THREAD ROLLING SEMIAUTOMATIC

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Engr M. I. Pisarevskiy Engr Ya. I. Zagon

The manufacture of threads by the rolling method is being used more and more extensively at machine building plants in the USSR.

A new powerful thread-rolling machine, the RN-24, has been manufactured for this purpose by the Scientific Research Institute of the former Ministry of Transport Machine Building USSR.

The RN-24 machine is a two-roller thread-rolling semiautomatic with hydraulic feed drive. In power and rigidity, the semiautomatic excels to a considerable degree existing thread-rolling machines; it also has a number of special design features.

For purposes of comparison, similar tests for the rigidity of the spindle unit were conducted on the new model and on Model PV-2. The rigidity of the RN-24 spindle unit was 55,200 kilograms per millimeter; that of the PV-2, 38,700 kilograms per millimeter.

Experimental testing of Model RN-24 to secure data on the maximum pitch and length was done on blanks of various sizes from steel 10, 45, 25KhNWA, 25Kh, and 2Khl3. Subsequently, metric threads with a pitch of 3, 4, 5, and 6 millimeters and 40, 50, 75, 90, and 100 millimeters long were rolled.

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The test showed that threads with a pitch of up to 6 millimeters and a length of up to 100 millimeters can be manufactured on this machine. A maximum pressure of $2^{\frac{1}{4}}$ tons, generated by the machine, assures obtaining this type of thread on blanks made of carbon, alloy, and stainless steel.

In testing Model RN-24 at a number of plants under production conditions, it was established that it fully meets requirements specified for modern high-duty equipment, and makes it possible to use a progressive technology in the manufacture of precision threads with a coarse pitch on parts made from structural steels of various types. The introduction of the powerful thread-rolling machine is opening the way for a successful solution of new technical problems, in particular in rolling small-module worms, precision trapezoidal threads with coarse pitch, and grooves of triangular profile on shafts, etc.

The technical specifications of the RN-24 semiautomatic are as follows:

Range of external diameter of threads being rolled (mm)	6-100
Maximum pitch of thread being rolled (mm)	6
Maximum width of threading rollers (mm)	115
Diameter of threading rollers (mm)	135-200
Speed of spindles (rpm)	16-205
Maximum pressure of threading rollers (tons)	24
Total power of electric motors (kw)	9
Dimensions of machine (meters)	1.95 x 1.35 x 1.5
Weight (tons)	4.5

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